

# PATENT ABSTRACTS OF JAPAN

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(71) Applicant : TOSHIBA CORP

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(72) Inventor : HONJO MASUSHI  
KIGOSHI MOTOHIRO

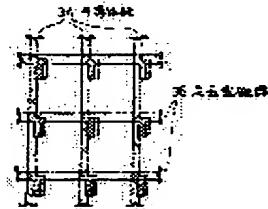
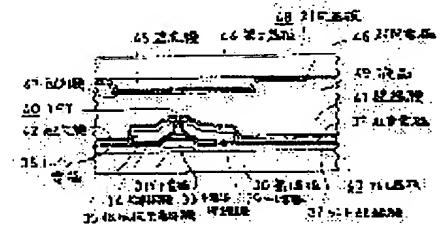
## (54) MANUFACTURE OF ACTIVE MATRIX TYPE LIQUID CRYSTAL DISPLAY ELEMENT

### (57) Abstract:

**PURPOSE:** To obtain a large aperture rate and increase the transmissivity by providing a transparent conductive film on a substrate, performing back exposure using scanning electrode wires and a semiconductor film as a mask, and then patterning the film and thus forming picture element electrodes.

**CONSTITUTION:** The glass substrate 30 is provided with scanning electrode lines 36 and gate electrodes 31 which are connected thereto, and they are covered with a gate insulating film 32. Then a protection insulating film 33 is arranged on an Si film 34 and a drain electrode 38 and a source electrode 39 are formed across an Si film 35 with low resistance to form a TFT 40. When a picture element electrode 37 is formed, the scanning electrode lines 36 and Si films are utilized for the back exposure to form picture element electrodes inside measures.

Thus, TFTs are formed in matrix nearby the intersections of the scanning lines 36 and signal electrode lines 34. The pattern of an insulating film 41 is formed and covered with an orienting film 42. A light shield film 45, an ITO electrode 46, and an orienting film 47 are provided on an opposite substrate 44 at positions facing the TFTs, the substrates are adhered together across spacers, and liquid crystal is injected to complete the element. In this configuration, the electrodes 37 can be put extremely close to the signal electrode lines and the aperture rate is improved.



### LEGAL STATUS

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